# **DRILLING**

PINC NO.	PINC	Authority	Enforcement Action
	GENERAL		
D-100	Is the drilling unit equipped with an operable traveling block safety device?	51(b)(1)	S
D-101	Are the results of the operational checks of the traveling block safety device entered in the driller's report?	51(b)(1)	W
	DIRECTIONAL SURVEYS		
D-110	Are inclinational surveys obtained on all vertical wells at intervals not exceeding 1,000 feet during the normal course of drilling?	51(e)(2)	S
D-111	Are directional surveys giving both inclination and azimuth obtained on all directional wells at intervals not exceeding 500 feet during the normal course of drilling?	51(e)(2)	S
D-112	Are directional surveys giving both inclination and azimuth obtained on all directional wells at intervals not exceeding 100 feet in all portions of the hole when angle changes are planned?	51(e)(2)	S
D-113	Are directional surveys giving both inclination and azimuth obtained at intervals not exceeding 500 feet prior to or upon setting surface or intermediate casing, liners, and at total depth on all wells?	51(e)(3)	S
	MOVING DRILLING RIGS		
D-120	Are all wells in the same well-bay which are capable of producing hydrocarbons shut-in below the surface with a pump-through-type tubing plug and at the surface with a closed master valve prior to moving drilling rigs and related equipment (or as otherwise approved by the District Supervisor)?	51(h)	W/C
	CASING PROGRAM		
D-150	Is casing set as approved?	54(a)	W

D-151	Is any portion of an annulus opposite a permafrost zone which is not protected by cement filled with a liquid which has a freezing point below the minimum permafrost temperature to prevent internal freezeback and which is treated to minimize corrosion?	54(a)(3)	W/S
D-152	Has a pressure-integrity test been run below the surface casing, the intermediate casing(s), and liner(s) used as intermediate casing(s)?	54(a)(6)	W/S
D-153	Are drilling operations suspended when the safe margin, as approved by the District Supervisor, between the mud weight in use and the equivalent mud weight at the casing shoe is not maintained?	54(a)(6)	W/S
D-154	Are the results of all tests and of hole-behavior observations made during the course of drilling related to formation integrity and pore pressure recorded in the driller's report?	54(a)(6)	W
D-155	If the hole for the drive or structural casing was drilled, was a quantity of cement sufficient to fill the annular space back to the mud line used?	54(b)	W
D-156	Is cement fill in the annular spaces of the conductor casing verified by the observation of cement returns, or in the event that observation of cement returns is not feasible, is an additional quantity of cement used to assure fill to the mud line?	54(c)(2)	W/S
D-157	Is surface casing cemented with a quantity of cement that fills the calculated annular space to at least 200 feet inside the conductor casing (or as otherwise approved by the District Supervisor)?	54(c)(3)	W/S
D-158	Have all casings, except the drive or structural casing, been pressure tested to 70 percent of the minimum internal-yield pressure of the casing (or as otherwise approved by the District Supervisor)?	55(a)	W/S
D-159	Are the results of all casing pressure tests recorded in the driller's report?	55(a)	W
D-160	Is each production liner lap tested to a minimum of 500 psi above formation fracture pressure at the shoe of the casing into which the liner is lapped (or as otherwise approved by the District Supervisor)?	55(b)	W/S

D-161	Is the drilling liner lap pressure test equal to or greater than the pressure that will be encountered at the liner lap when conducting planned pressure integrity tests below the liner shoe?	55(b)	W/S
D-162	Are the results of the liner seal tests recorded in the driller's report?	55(b)	W
D-163	Has the casing been pressure-tested, calipered, or otherwise evaluated every 30 days during prolonged operations?	55(c)	W/S
D-164	Is there proper waiting-on-cement time before drilling was resumed?	55(d)	W
	BOP SYSTEMS AND COMPONENTS		
D-200	Does the working-pressure rating of all BOP components exceed the anticipated surface pressure to which they may be subjected?	56(c)	S
D-201	Does the accumulator system provide sufficient capacity to supply 1.5 times the volume of fluid necessary to close and hold closed all BOP equipment units with a minimum pressure of 200 psi above the precharge pressure without assistance from a charging system?	56(d)(1)	S
D-202	Have accumulator regulators, supplied by rig air and without a secondary source of pneumatic supply, been equipped with manual overrides or, alternately, other devices provided to ensure capability of hydraulic operations if rig air is lost?	56(d)(1)	S
D-203	Is an automatic backup accumulator-charging system, supplied by a power source independent from the power source to the primary accumulator-charging system, and possessing sufficient capability to close all BOP components and hold them closed, provided?	56(d)(2)	S
D-204	Is at least one operable remote BOP control station, in addition to the one on the drilling floor, provided in a readily accessible location away from the drilling floor?	56(d)(3)	S
D-205	Is a drilling spool with side outlets provided if side outlets are not provided in the body of the BOP stack to provide for separate kill and choke lines?	66(d)(4)	S

D-206	Is there a choke and a kill line each equipped with two full-opening valves?	56(d)(5)	S
D-207	Is at least one of the valves on the choke line and on the kill line remotely controlled?	56(d)(5)	S
D-208	Is a fill-up line installed above the uppermost preventer?	56(d)(6)	S
D-209	Does the choke manifold and choke equipment subject to well and/or pump pressure have a rated working pressure at least as great as the rated working pressure of the ram-type BOP's (or as otherwise approved by the District Supervisor)?	56(d)(7)(i)	S
D-210	Are all components of the choke manifold system protected from the danger of freezing by heating, draining, or filling with proper fluids?	56(d)(7)(ii)	S
D-211	If buffer tanks are installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together, are isolation valves installed on each line?	56(d)(7)(iii)	S
D-212	Do valves, pipes, flexible steel hoses, and other fittings upstream of, and including, the choke manifold have pressure ratings at least as great as the rated working pressure of the ram-type BOP's (or as otherwise approved by the District Supervisor)?	56(d)(8)	S
D-213	Does the wellhead assembly have a rated working pressure that exceeds the anticipated surface pressure to which it may be subjected?	56(d)(9)	S
D-214	On a conventional drilling rig, is an essentially full-opening kelly cock installed below the swivel (upper kelly cock)?	56(d)(10)(i)	S
D-215	On a conventional drilling rig, is an essentially full-opening valve of such design that it can be run through the BOP stack (strippable) installed at the bottom of the kelly (lower kelly cock)?	56(d)(10)(i)	S
D-216	With a mud motor in service and while using drill pipe in lieu of a kelly, is one kelly cock located above and one strippable kelly cock located below the joint of drill pipe employed in lieu of a kelly?	56(d)(10)(i)	S

D-217	On a top-drive system equipped with a remotely-controlled valve, is a second and lower strippable essentially full-opening valve installed?	56(d)(10)(i)	S
D-218	Is a wrench to fit each manually-operable valve in a conventional drilling rig, mud motor, and top-drive system stored in a location readily accessible to the drilling crew?	56(d)(10(i)	S
D-219	Are the inside BOP and full-opening drill-string safety valves, fitting all sizes of pipe in the drill-string, maintained in the open position on the rig floor at all times while drilling operations are being conducted?	56(d)(10)(ii)	S
D-220	Is a safety valve available on the rig floor assembled with a compatible connection to fit the casing string being run in the hole?	56(d)(10)(iii)	S
D-221	Are locking devices installed on the ram-type preventers?	56(d)(11)	S
D-222	Prior to commencing tapered drill-pipe operations, is the BOP stack equipped as required?	56(g)	S
	SURFACE BOP SYSTEMS		
D-230	Is at least one of the valves on the kill line remotely controlled, or is a check valve installed on the kill line in lieu of the remotely-controlled valve?	56(d)(5)	S
D-231	If a check valve is installed in lieu of a remotely controlled valve in the kill line, are two readily accessible manual valves in place and is the check valve placed between the manual valves and the pump?	56(d)(5)	S
D-232	Prior to drilling below surface or intermediate casing, is a BOP system installed consisting of at least four remote-controlled, hydraulically-operated BOP's including at least two equipped with pipe rams, one with blind rams and one annular type?	56(f) 56(g)(2)	S

## **SUBSEA BOP SYSTEMS**

D-240	Prior to drilling below surface and intermediate casing, are there at least four remote-controlled, hydraulically operated BOP's including at least two equipped with pipe rams, one with blind-shear rams and one annular type?	56(e)(1) 56(g)(2)	S
D-241	Is a subsea accumulator closing unit installed?	56(e)(1)	S
D-242	Does the BOP system include operable dual-pod control systems when drilling below the surface casing?	56(e)(2)	S
D-243	Do the records indicate that the glory hole is of the approved depth to assure that the top of the stack is below the deepest probable ice-scour depth?	56(e)(5)	S
	BOP TESTS, ACTUATIONS, INSPECTIONS, AND MAINTENANCE		
D-250	Prior to conducting high-pressure tests, are all BOP systems tested to a low pressure of 200 to 300 psi?	57(a)	W/S
D-251	Are the choke manifold valves, upper and lower kelly cocks, top-drive, inside-BOP, and the drill-string safety valves pressure tested to pipe-ram test pressures (or as otherwise approved by the District Supervisor)?	57(d)	W/S
D-252	Are safety valves assembled with connections actuated prior to running casing?	57(d)	S
D-253	Are surface and subsea BOP systems pressure tested before drilling out each string of casing or before continuing operations in cases where the cement is not drilled out?	57(e)(2)	W/S
D-254	Was the reason for postponing pressure testing entered into the driller's report?	57(e)3)	W
D-255	Is pressure testing performed at intervals to allow each drilling crew to operate the equipment?	57(e)(3)	W
D-256	Are blind and blind-shear rams actuated at least once every 7 days?	57(e)(4)	W/S
D-257	Are variable bore-pipe rams pressure tested	57(e)(5)	W/S

against all sizes of pipe in use?

D-258	Are surface and subsea BOP systems pressure tested following the disconnection or repair of any well-pressure containment seal in the wellhead/BOP stack assembly, but limited to the affected component?	57(e)(6)	W/S
D-259	Are the BOP systems and marine risers visually inspected at least once each day (or as otherwise approved by the District Supervisor)?	57(f)	W
D-260	Are the time, date, and results of all pressure tests, actuations, and inspections of BOP systems, system components, and marine risers recorded in the driller's report or referenced document?	57(g)	W
D-261	Are BOP test pressures recorded on a pressure chart, unless otherwise approved by the District Supervisor?	57(g)	W
D-262	Is the test interval for each BOP component tested sufficient to demonstrate that the component is effectively holding pressure?	57(g)	W
D-263	Are BOP test pressure charts certified as correct by the operator's representative at the facility?	57(g)	W
D-264	Does the documentation indicate the sequential order of BOP and auxiliary equipment testing and the pressure and duration of each test?	57(h)(1)	W
D-265	Is the control station used during the test identified in the driller's report or referenced documents?	57(h)(2)	W
D-266	Are any problems or irregularities observed during BOP and auxiliary equipment testing and any actions taken to remedy such problems or irregularities recorded in the driller's report or referenced documents?	57(h)(3)	W
D-267	Are all records including pressure charts, driller's report, and referenced documents of BOP tests, actuations, and inspections available at the facility for the duration of the drilling activity?	57(h)(4)	W
D-268	Are all such records retained for a period of two years at the facility, at the lessee's field office nearest the facility, or at another location conveniently available to the District Supervisor?	57(h)(4)	W

# **SURFACE BOP TESTS**

D-270	Are surface BOP systems pressure tested when installed?	57(e)(1)	W/S
D-271	Are ram-type BOPs and the choke manifold pressure tested with water to rated working pressure (or as otherwise approved by the District Supervisor)?	57(b)	W/S
D-272	Is the annular-type BOPs pressure tested with water to 70 percent of its rated working pressure (or as otherwise approved by the District Supervisor)?	57(b)	W/S
D-273	Are surface BOP systems pressure tested at least once each week, but not exceeding 7 days between pressure tests, alternating between control stations?	57(e)(3)	W/S
	SUBSEA BOP TESTS		
D-281	Are subsea BOP system components stump pressure tested at the surface with water to their rated working pressure?	57(c)	W/S
D-282	Are subsea annular-type BOPs stump pressure tested at the surface with water to 70 percent of their rated working pressure (or as otherwise approved by the District Supervisor)?	57(c)	W/S
D-283	After the installation of the BOP stack on the seafloor, are the ram-type BOPs and choke manifold pressure tested to rated working pressure (or as otherwise approved by the District Supervisor)?	57(c)	W/S
D-284	After the installation of the BOP stack on the seafloor, is the annular preventer pressure tested to 70 percent of its rated working pressure (or as otherwise approved by the District Supervisor)?	57(c)	W/S
D-285	Are subsea BOP systems pressure tested at least once each week, but not exceeding 7 days between pressure tests, alternating between control stations and pods?	57(e)(3)	W/S
D-286	For subsea systems, is the pod used during the test identified in the driller's report or referenced documents?	57(h)(2)	W

## WELL-CONTROL DRILLS

D-290	Are well-control drills conducted for each drilling crew in accordance with § 250.58?	58(a)	W
D-291	Is a copy of the complete well-control drill plan posted on the rig floor and/or bulletin board?	58(a)(2)	W
D-292	Are drills conducted in accordance with the well-control plan?	58(a)(2)	W
D-293	Are well-control drills recorded in the driller's report?	58(a)(3)	W
	DIVERTER SYSTEMS		
D-300	When drilling a conductor or surface hole, is the drilling unit equipped with a diverter system consisting of a diverter sealing element, diverter lines, and control systems (or as otherwise approved by the District Supervisor)?	59(a)	S
D-301	Is the diverter system equipped with remotely-controlled valves in the flow and vent lines that can be operated from at least one remote-control station in addition to the one on the drilling floor?	59(c)	S
D-302	Are the diverter sealing element, diverter valves, and diverter-control systems including the remote-control system, actuation-tested, and the vent lines flow tested when first installed?	59(f)	W
D-303	Are subsequent actuation tests of the diverter sealing element, diverter valves, and diverter-control systems, including the remote-control system conducted at least once every 24-hour period alternating between control stations?	59(f)	W
D-304	Are all valves used in the diverter system full-opening?	59(c)	S
D-305	Are all right-angle and sharp turns in the diverter lines targeted?	59(c)	S
D-306	If flexible hose is used for diverter lines instead of rigid pipe, does the flexible hose have integral end couplings?	59(c)	S

D-307	Is the entire diverter system firmly anchored and supported to prevent whipping and vibration?	59(c)	S
D-308	Are all diverter control instruments and lines protected from physical damage from thrown and falling objects?	59(c)	S
D-309	Are all pressure test, flow test, and actuation results recorded in the driller's report?	59(f)	W
D-310	Are diverter systems and components used in subfreezing conditions suitable for use under these conditions?	59(g)	S
D-311	If the diverter system utilizes only one spool outlet, are branch lines installed to provide downwind diversion capability?	59(d)(1) 59(e)(1)	S
	SURFACE DIVERTER SYSTEMS		
D-322	Is the minimum spool outlet and diverter line internal diameter at least 10 inches?	59(d)(2)	S
D-323	If dual spool outlets are utilized, does each outlet have a minimum internal diameter of at least 8 inches?	59(d)(2)	S
D-324	If dual spool outlets are utilized, are both outlets piped to overboard lines?	59(d)(2)	S
D-325	If dual spool outlets are utilized, does each line downstream of the changeover nipple at the spool have a minimum internal diameter of 10 inches?	59(d)(2)	S
D-326	Are diverter sealing elements and diverter valves pressure tested to a minimum of 200 psi when nippled up on conductor casing, with no more than 7 days elapsed time between subsequent tests?	59(f)	W
	SUBSEA DIVERTER SYSTEMS		
D-333	Are all spool outlet and diverter line internal diameters at least 12 inches?	59(e)(2)	S
D-334	On dynamically-positioned drill ships, is vessel heading maintained to allow for downwind diversion?	59(e)(3)	S

#### **MUD PROGRAM**

D-400	Has mud been properly conditioned by circulation before starting out of the hole with drill pipe, or is there proper documentation in the driller's report that circulation was not necessary?	60(b)(1)	W
D-401	When coming out of the hole with drill pipe, is the annulus filled with mud before the change in mud level decreases the hydrostatic pressure by 75 psi, or every five stands of drill pipe, whichever gives a lower decrease in hydrostatic pressure?	60(b)(3)	W
D-402	Has the number of stands of drill pipe and drill collars that may be pulled prior to filling the hole and the equivalent mud volume been calculated and posted near the driller's station?	60(b)(3)	W
D-403	For each casing string, is the maximum pressure to be contained under the BOP posted near the driller's station?	60(b)(6)	W
D-404	In areas where permafrost and/or hydrate zones may be present or are known to be present, are drilling fluid temperatures controlled?	60(b)(7)	W
D-405	Is an operable mud-gas separator and operable degasser installed in the mud system prior to commencement of drilling operations and maintained for use throughout the drilling of the well?	60(b)(8)	S
D-406	Is the mud in the hole circulated or reverse-circulated prior to pulling the drill-stem test tools from the hole?	60(b)(9) 60(b)(2)	W
D-407	Is mud-testing equipment maintained on the drilling rig at all times (or as otherwise approved by the District Supervisor)?	60(c)(1)	S
D-408	Are mud tests performed once each tour, or more frequently, as conditions warrant?	60(c)(1)	W
D-409	Are results of mud tests recorded in the driller's report?	60(c)(1)	W
D-410	Is a recording mud-pit level indicator with audible and visual warnings installed and used?	60(c)(2)(i)	S

D-411	Is a mud-volume measuring device used to determine the mud volumes required to fill the hole on trips?	60(c)(2)(ii) 60(b)(3)	S
D-412	Are mud-return indicator devices which indicate the relationship between mud-return flow rate and pump discharge rate installed and used?	60(c)(2)(iii)	S
D-413	Is operable gas-detecting equipment installed to monitor drilling mud returns, with the required type of indicators located on the rig floor or in a continuously manned mud-logging unit having immediate communication with the rig floor?	60(c)(2)(iv)	S
D-414	Are minimum quantities of mud and mud materials maintained at the drill site as necessary to ensure well control?	60(d)(1) 60(d)(3)	W/S
D-415	Are records of daily inventories of mud and mud materials maintained at the well site?	60(d)(2)	W
	MUD-HANDLING AREAS CLASSIFIED AS WHERE DANGEROUS CONCENTRATIONS OF COMBUSTIBLE GAS MAY ACCUMULATE		
D-421	If not continuously activated, are mechanical ventilation systems activated on signal from gas detectors that are operational at all times indicating the presence of 1 percent or more of gas by volume?	60(e)(1)	S
D-421	ventilation systems activated on signal from gas detectors that are operational at all times indicating the presence of 1 percent	60(e)(1)	S
D-421 D-422	ventilation systems activated on signal from gas detectors that are operational at all times indicating the presence of 1 percent or more of gas by volume?	60(e)(1)	S S
	ventilation systems activated on signal from gas detectors that are operational at all times indicating the presence of 1 percent or more of gas by volume?  Are all classified mud-handling areas:  Equipped with high-capacity mechanical ventilation systems unless such ventilation		
D-422	ventilation systems activated on signal from gas detectors that are operational at all times indicating the presence of 1 percent or more of gas by volume?  Are all classified mud-handling areas:  Equipped with high-capacity mechanical ventilation systems unless such ventilation is provided by natural means?  Maintained at a negative pressure relative to an adjacent area if mechanical ventilation is	60(e)(1)	S

D-426	Equipped with either explosion-proof or pressurized electrical equipment to prevent the ignition of explosive gases?	60(e)(4)	S
D-427	Where air is used for pressuring, is the air intake located outside of, and as far as practicable from, hazardous areas?	60(e)(4)	S
D-428	Are mechanical ventilation systems fitted with alarms which are activated upon a failure of the system?	60(e)(5)	S
D-429	Are gas detection systems tested for operation and recalibrated at a frequency such that no more than 90 days shall elapse between tests?	60(e)(6)	W/S
	SECURING OF WELLS		
D-440	Is a downhole safety device such as a cement plug, bridge plug, or packer installed when drilling operations are interrupted by events such as those which force evacuation of the drilling crew, prevent station keeping, or require repairs to major drilling or well-control equipment?	61	W
	SUPERVISION, SURVEILLANCE, AND TRAINING		
D-450	From the time drilling operations are initiated and until the well is completed or abandoned, is the well continuously under surveillance unless the well is secured with BOP's, bridge plugs, packers, or cement plugs?	63(b)	W
D-451	Are lessee and drilling contractor personnel trained and qualified in accordance with the provisions of Subpart O of 30 CFR 250?	63(c)	W\C
D-452	Are records of specific training, which lessee and drilling contractor personnel have successfully completed, the dates of completion and the names and dates of courses maintained at the drill site?	63(c)	W
	APPLICATIONS FOR PERMIT TO DRILL		
D-460	Does the lessee have written or oral approval to drill the well?	64(a)	S
D-461	Does the lessee have written or oral approval to change plans, make changes in major drilling equipment, deepen or plug back a well, or engage in similar activities?	65(a)	S